

NATIONAL CAVE AND KARST RESEARCH INSTITUTE

MONTHLY UPDATE FOR JULY 2003

PROGRESS MADE BY THE INSTITUTE STAFF AND PARTNERS THIS MONTH:

- Louise Hose (LH) met with Jon Tully (Carlsbad) and the design team of Beryl Durham and Ron Nims to discuss the headquarters building design effort. Roger Scott (RS) attended another meeting with these folks as well as representatives from the Carlsbad Department of Development.
- New Mexico Tech (NMT) worked towards finalizing the paperwork for the new Chief Scientist position and will advertise in early August.
- Planning continues for the thesis project of an NMT graduate student focusing on the micrometeorology of Carlsbad Cavern. This project entails both collection of an extensive data set of parameters at various points in the cave, and a modeling effort in an attempt to understand what governs the interior environment of this famous, and well-visited national treasure. Beyond its intrinsic scientific interest, the National Park Service cave specialists at Carlsbad will be able to use the results to better manage the cave for the benefit of current and future generations.
- Penny Boston (PB) is also serving as primary advisor and outside committee member for NMSU graduate student Morgan Perrone, who is pursuing a thesis project in Spider Cave on the Carlsbad Caverns National Park lands. Morgan is looking at the origins of a unique deposit known as “moonmilk” which occurs in some caves worldwide. The deposits in Spider, known as “Crisco”, may come from a unique interaction between microorganisms and the parent limestone rock producing essentially a “living mineral”. This project builds upon some of PB’s previous and current research in Spider Cave.
- Our NMT affiliates submitted a major proposal to the Research and Culture Collections Program within the National Science Foundation (NSF) to make New Mexico the site of the world’s only living collection and DNA database of cave microorganisms. This proposal developed in collaboration with cave research colleagues at the University of New Mexico (UNM) and the INRAM coalition (Inst. Natural Resources & Management) coordinated through the NM Museum of Natural History and Science in Albuquerque.
- The NMT program has also submitted a series of smaller, individual research grant proposals to NSF and NASA to support various specific cave research projects involving undergraduate and graduate students. They have just been notified of the approval of one of these small efforts to NSF, “Unique Ferromanganese Deposits in Caves”.
- Institute affiliates Lewis Land (LL) and PB, along with B. Raatz (also NMBGMR), have undertaken the task of organizing a future New Mexico Geological Society Fall Field Conference as a tour of important karst and cave geology in New Mexico. At the request of the organization, we have just pushed the date up to 2006 from 2007.
- Institute staff in Carlsbad (LH, LL, and Roger Scott) moved office this month, although they remain on the New Mexico State University at Carlsbad campus.

Hose and Scott continue in the Carlsbad Environmental Monitoring and Research Center while Land moved to the campus' central building.

- LH, PB, and five scientists/cavers (Doug Soroka, Lynn Kleina, Diana Northup, Kathy Lavoie, and Ken Ingham) have worked extensively this month with the Japanese Broadcasting Corporation (NHK) on a high-definition television documentary on active sulfur speleogenesis. Field work with the production team started in late July as LH spent a week in the field helping the NHK team develop the story line and potential sites to demonstrate the scientific concepts. Some shooting took place. NHK is paying salary and all expenses for the Institute-provided assistance on this project.
- Mid-July marked the end of Roger Scott's current intermittent appointment with the Institute and he worked on other NPS issues.
- Long-time caver and interpretive center consultant Frank Binney visited NPS visitor centers in southern New Mexico and provided the Institute with volunteer expertise on the issues involved with developing appropriate educational displays in our future interpretive center.
- The Director sent out a letter to about 100 representatives of diverse U.S. cave and karst programs (governmental, academic, and non-profit) requesting input and suggestions concerning the future Institute operations and administration.
- LH and RS submitted an article covering the Institute to the National Cave Association, a non-profit "trade" organization for cave owners and managers.
- LL continued a preliminary investigation of springs discharging into Lea Lake, a flooded gypsum sinkhole (cenote) at Bottomless Lakes State Park, NM.
- Institute scientists submitted several cave/karst-related abstracts for presentation at the Geological Society of America annual meeting next fall.
- LL and PB spent several days participated in a scientific assessment of Snowy River Passage, a new passage of Fort Stanton Cave discovered by Cave Research Foundation explorers in 2001. The passage was subsequently closed by the Bureau of Land Management for two years until a scientific assessment team could investigate and make recommendations on non-invasive survey procedures.

PLANS: Anticipated activities for the near future include:

- PB (NMT-NCKRI), LH (NPS-NCKRI), and Dave Shaver (NPS-GRD) intend to attend the **NSS National Convention** in early August. They will be available to discuss the Institute and present about a half-dozen formal presentations on behalf of the Institute.
- Scientists and cavers working with NHK will continue assisting in the field (southern Mexico) and laboratory (NMT and UNM) throughout August and into September.
- We anticipate RS returning in mid-August to work with the Institute for several more months.
- In a continuing effort seeking broad input and investment towards development of the Institute, NCKRI plans a facilitator-run, 2-day meeting of a small (~15) but divert group of cave/karst program representatives on October 5th & 6th in Sheperdstown, WV, to discuss the Institute's operational & administrative vision.

- RS worked with CARC Farms, a non-profit organization providing opportunities for disabled workers in Carlsbad, to develop promotional materials.

NCKRI STAFF:

LH – Louise Hose, NPS

RS – Roger Scott, NPS

LL – Lewis Land, New Mexico Bureau of Geology and Mineral Resources

PB – Penelope Boston, New Mexico Institute of Mining and Technology